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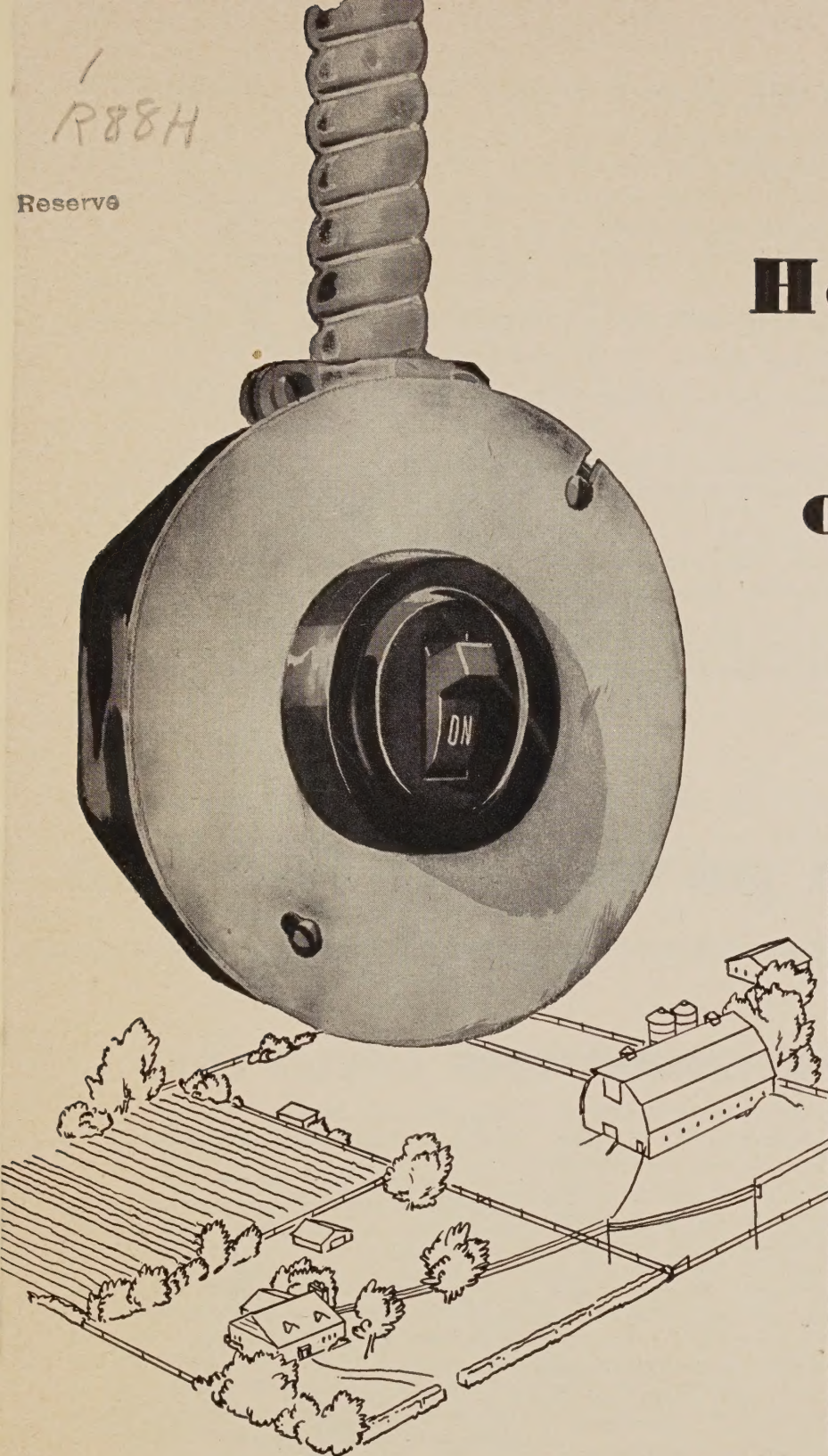




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Reserve

# How to keep power on the job



## INSIDE...

- How to tell if your wiring is protected
- Fuses and how they work
- How to check your appliance loads
- How to prevent blowouts
- What to do if a blowout occurs
- Check your cords and plugs
- Planning for new wiring.

## WHEN THE LIGHTS GO OUT...

What do you do when the lights black out all over your house, in several rooms, or in your barn? You fumble with a flashlight, candles, the oil lamp up on the shelf . . . and then . . .

*That's when good co-op members show their cooperativeness!*

They remember that the tires on their Co-op's service truck have only so much rubber left in them. . . . They remember that the truck is travelling on rationed gasoline. They remember

that the service man has other places to go. . . .

So they try to find the trouble themselves.

Better still, they try to *prevent* the trouble before it happens, by making sure, as far as possible, that their wiring system and the electrical appliances they use in their home and on the farm will not break down . . . that the lights and motors and pumps will not fail.



## IF TROUBLE IS ON HIGH LINE

Electrical trouble usually starts in one of two places—in the line or the transformer bringing service to your farm, or in the wiring system of your farm itself.

If your neighbor's power goes off, as well as yours, the trouble's in the distribution line. So first, check with your neighbor—if you can. If his service is off, too, the trouble is on the line.

Here are some ways you can help if outage is on your Co-op's power line—

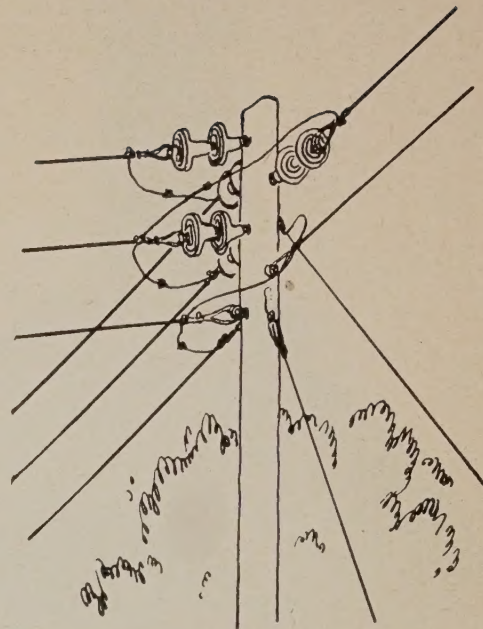
Use facilities set up by your Co-op to get word to the Co-op office.

Guard the broken line or get someone else to guard it, to keep curious folks away.

*Don't touch the wire. Don't let other unauthorized persons touch it.* A "live" line is as dangerous as dynamite and should be handled only by linemen with special tools and gloves.

Don't climb the pole to get at the source of the trouble. Many Co-op members have suffered death or serious injury by just such action. Get word to your Co-op office. Then wait for the lineman.

Remember this: When the trouble is on the high line it is your Co-op's responsibility to make necessary repairs. And you can be certain that those repairs will be made just as rapidly as possible.



# How to keep power on the job

## HOW TO DETERMINE YOUR CIRCUIT LOAD

The safest way to find out how much electricity your circuit can carry safely, and to avoid overload, is to learn just how many watts each of your electrical appliances and equipment uses. This wattage is marked on the top of electric lamps. Most appliances carry the wattage on their nameplate. Look for this figure. If in doubt, consult your Co-op. Here are sample wattages for several common appliances and equipment:

Heating Appliances	Average Wattage
Iron	660-1000
Ironer	1200-1320
Toaster	500-800
Hot Plate	400-1000
Roaster	1000-1320
Percolator	400
Vacuum Type Coffee Maker	400
Motorized	Horsepower
Washer	1-4 to 1-2
Refrigerator	1-4 to 1-2
Mixer	1-16 to 1-8
Vacuum Cleaner	1-6 to 1-4

(one horsepower equals 746 watts)

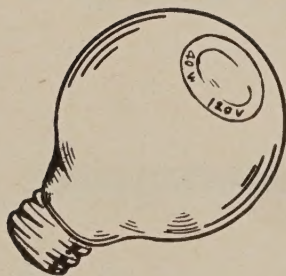
Horsepower and amperage are shown on the nameplates of most motorized appliances.

It's important to see that *not more* of these appliances are being used at any one time on one circuit, than the total wattage which that circuit will bear.

For example, if you use a roaster (1200 watts) to cook your dinner, do some ironing (660 watts) at the same time, burn two lamps, of 50 watts each, *all on one 15-ampere circuit*, you will have a "blowout." Even if a blowout does not occur at once, your circuit's insulation will be overheated and thus weakened.

It's a good idea to find out what outlets in your home are on what circuit.

You can learn this easily by turning off all the lights and appliances in your home and unscrewing all the fuses; then replace each fuse, one at a time, and turn on the lights to see which respond. When you have determined where your circuit runs, paste a diagram by your fuse box so that you will know which size fuse to get for each circuit, in the event of a blowout.





## IF TROUBLE IS ON YOUR FARM

Here is where you can be of special service to your Co-op. If the trouble is on your farm itself, perhaps you can make the repair.

Let's see what happens when something goes wrong with your farm's service.

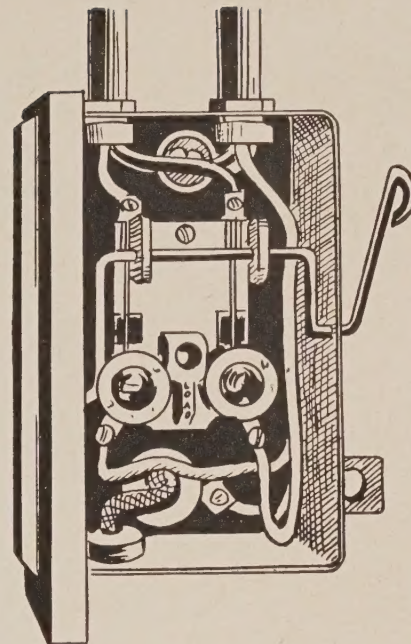
Power travels around your farm on wire circuits. These circuits are protected by fuses or circuit breakers. A fuse is a link of soft metal which melts when too much current passes over your circuit.

Trouble often starts in the wires or in improper use of the fuses.

If a wire becomes frayed, causing the insulation to give way, or if it is forced to carry more electrical current than it was intended to carry, it may "short"—the fuse may "blow out," and the power fail to reach your appliances, or, the wire may overheat, causing a serious fire hazard.

It pays to know how to make simple farm electric repairs yourself because when your power line blacks out, the temperature rises in your refrigerator and your milk cooler. A chill sets in under your chick brooder. The water system goes dead and once again you have to pump by hand. Once again you're back to kerosene lamp living.

Knowing just a few, easily learned facts about your wiring system and about the principles of electricity will help you to keep electricity on the job. And knowing what to do when your line falls dead can save you from possibly serious injury should you or members of your family attempt to make repairs without knowing how.



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Help to see that your farm's power doesn't black out. You can spot trouble when it happens—and, if it's on your farm, and not serious, you can fix it yourself. If the trouble is on the high line make sure that your Co-op is notified at once. Keep your electricity working for you.

## KNOW WHEN YOUR WIRING SYSTEM IS SAFE

A fuse is a safety valve for your electrical system—but only if it is the right size. The size you need depends upon the size of the wire to be protected. The size of the wire, in turn, depends on the electrical load it has to carry.

Farm homes usually have two kinds of electrical circuits; one of Number 14 wire, protected by a 15-ampere fuse, for general lighting and ordinary receptacles; the second of heavier Number 12 wire, protected by a 20-ampere fuse, for the connection of appliances in kitchen and dining room. Heavier wire is also used in most barns and outbuildings to accommodate motors—and other heavy equipment.

If the fuse you buy is larger—has a higher ampere rating—than the corresponding size of the wire in your circuit, a stronger current may pass over the wire than it can safely bear, and the fuse will not carry out its proper function of "blowing out." The insulation on your wire may not then be able to stand the extra load of electricity, and the heated wire may start a fire.

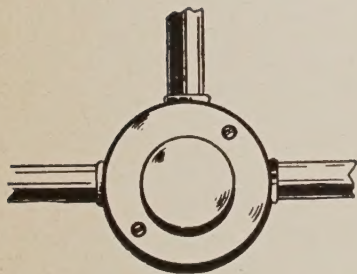
**Rule 1. Get The Right Size Fuse.** Check the rating on your fuses when you buy them. Ask your Co-op or your electrical inspector the size of the wire in your house circuit or outbuilding circuit. Make sure you get the *right* fuse for the wire size.

**Rule 2. Don't Overload your Circuit!**

The electrical current that enters your home and farm probably comes at an average pressure of 115 volts. Multiply this by the size of your fuse, and you will see the limit of *watts* beyond which you cannot overload your circuit without blowing your fuse. For example—

115 volts x 15 amperes equals 1,725 watts.

A 20-ampere fuse, of course, could take a heavier load.





# WHAT TO DO IN CASE OF A BLOWOUT



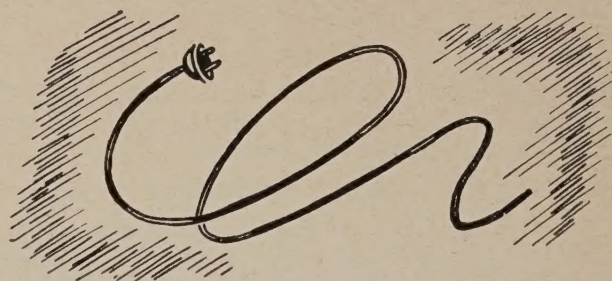
Find out which fuse has "blown." The window of the fuse will probably be smudged. Remedy the cause of the trouble—such as the overload. Open the main house switch. Replace the fuse with a new fuse, and close the switch.

If your system is protected by a circuit breaker, make sure that the breaker switch is all the way down in the "off" position before attempting to throw it back on.

It is advisable not to have many appliances in operation when the power is turned on again, as this will place your system momentarily under a heavy load.

Keep enough of the right size fuses on hand at all times.

Never use any substitute for a fuse. You are inviting fire in your home if you do.



# CHECK THOSE CORDS!

Even if your wiring system is adequate and safe, blowouts may occur if your cords or electrical equipment are too weak to do their job.

Check your cords periodically for fraying. When you find a badly-frayed cord, don't delay in shortening it by cutting off the worn end or, if necessary, replacing the entire cord. New cords are very hard to get in war-time—so take the very best care of those you have. Don't let them become kinked; keep them free of dirt and grease; don't run them under rugs where they can be stepped upon.

Also use the right cords for each appliance—heater cords for heating appliances, rubber-covered cords for washing machines and other heavy equipment. Never use a heating appliance from a lighting drop cord—appliances of more than 250 watts capacity may not be so attached.



# WATCH THE PLUGS!

Make sure you remove the plug from the convenience outlet gently, grasping plug itself, and immediately after you are through using the appliance. Always disconnect the cord from the convenience outlet before removing the plug from the appliance.

Keep your plugs in good repair. When making a new connection, wrap the wires neatly around the screws in the plug, and keep the screws tight. The wire should turn around the screw in the same direction as the screw is tightened.

# WIRING YOUR FARM?

Have you—

Checked with your co-op electrical contractor and inspector?

Found out what size of wire you'll need?

Planned and located enough convenience outlets for all needs?

Made sure that fuses or circuit breakers will be large enough to carry a full load with all appliances in use, but not too large?

Planned a complete inspection of your finished job?

*Check these points and your wiring job should be safe!*